



A Literature Review of Enterprise Resource Planning (ERP) System and Its Benefits on Business Organisation

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Abstract

The research paper examined the benefits of enterprise resource planning (ERP) System on business organisations. The paper adopted secondary sources of data collection through textbooks, internets, journals and other literatures. The overall benefits of ERP include improving performance and save time, optimize the control and analysis of management decisions there in the long term, reduced costs for the company operations. The paper specifically examined four functional areas; Human resources, Finance, Production and Marketing management functions and its ERP benefits along Strategic, Tactical and Operational lines. The theoretical and literature studies revealed that achieving a good business efficiency in each functional department is hinged on the desire to have an integrated and centralised system in a business organisation, thus ERP is highly needed to achieve this purpose. The paper concluded by recommending that business organisations should endeavour to explore and apply ERP system in order to help reduce the cost of operations thereby remain competitive.

KEYWORDS: *Enterprise, Functional areas, resource planning, business organisation, strategic functions, operational functions.*

Introduction

Enterprise Resources Planning (ERP) are information systems designed to manage all the processes of an organization so that they allow and facilitate decision-making from a global perspective of the organization as a whole, and not only from a departmental point of view. Therefore, this type of systems become a key factor in organizations (Sherzad, Hassan, Ma'moun, & Fareeba 2019). Enterprise Resource Planning (ERP) systems are generally considered to be software packages made up of financial, manufacturing, human resource and other modules integrated to provide a firm with a single source of data about its operations. Business management has entered the world of networking competition. This has moved the competition from a local to that of global business environments and from company against company to that of a supply chain.

Enterprise Resource Planning (ERP) system has become one of the main pre-requisites for many companies enabling them to compete in the local and global market, a price of entry to gain a competitive advantage in the global economy, and a backbone for e-business as well as for the whole supply chain. Many companies are

still reluctant to implement ERP system and therefore they will not be able to connect their supply chain with several global and local companies where ERP system has become a pre-requisite and a price of entry for the global economy. Enterprise Resource Planning is mostly considered in the field of strategic Planning and Management. Characteristics of any good enterprise resource planning system include Work flow management through a functional system, Centralised enterprise data Base, Security of information and data, Accessibility, Flexibility, Integrated System, Modular: works along the line of subunits, Parametric: programming interface that can be created through network within the system of organisation. The corporate competitive environment is being liberalized and globalized, therefore the organizations, business organisations need greater interaction between their stakeholders. One of the problems organizations face to is the segregation of the business functions in an organization. Thus, the business experienced to implement ERP systems for solving this problem. In contrast, the ERP projects have not been effective enough and hence have been unable to achieve all the results

envisaged. Therefore, an in depth understanding about the benefits of ERP implementation is needed to ensure the successful system implementation, (Samira, Abdoulmohammad, Negin & Riza, 2013).

STATEMENT OF THE PROBLEM

Previously businesses have been functioning as an organizational structure which had separated the functional fields, therefore each functional field has separated the departments. In this way, every department is completely isolated from other departments. For instance marketing and sales might be separated from supply chain management, Human resource department widely separated from ICT and R&D department thus, we might conclude that what happens in one department is not closely related to other departments. These departments are interdependent, each requiring data and information from others. Also divergent applications by practitioners and academics, as well as by researchers in alternative fields of study, has allowed for both considerable proliferation of information on the topic but also for a considerable amount of confusion regarding the meaning of the term ERP. Achieving a good business efficiency in this department is hinged on the desire to have an integrated and centralised system in a business organisation, thus ERP is highly needed to achieve this purpose.

OBJECTIVE OF THE STUDY

The major objective of this research paper focuses on the application of Enterprise Resource Planning (ERP) and its benefit on business organisations. However, the following are the specific objective of the research.

1. To examine the strategic benefits of enterprise resource planning (ERP) System along functional departments
2. To ascertain the tactical and operational benefits of enterprise resource planning (ERP) System along functional departments
3. To know the challenges inherent in the application of enterprise resource planning (ERP) System by business organisations.

RESEARCH METHODOLOGY

The methodology implored is through literature review. The researchers adopted secondary sources of data collection through textbooks, internets, journals and other literatures. A conceptual approach was also adopted to aid the understanding of Enterprise Resource Planning, (ERP).

CONCEPTUAL FRAMEWORK

ENTERPRISE RESOURCE PLANNING (ERP)

Globalization has stressed the need to raise the level of firms' competitiveness in order to compete worldwide. This challenge leads to the expansion of markets and increases the pressure on competitors to fulfill customers' expectations in order to win them, by providing them fair prices, higher/ (right) quality in products or services and more reliable delivery dates. As a result, contemporary tools have to be intensely disseminated, especially in today's business environments to lower the total production cost in the entire supply chain, through reducing inventories. The larger scope of ERP systems allows the tracking of orders and other important planning and control information throughout the entire company from procurement to ultimate customer delivery. Many ERP systems are capable of allowing managers to share data between firms, which means that managers can potentially have visibility across the complete span of the supply chain share. (Ziad & Ali, 2019). Enterprise Resource Planning (ERP) Systems, these comprehensive, packaged software solutions which seek to integrate the complete range of a business's processes and functions in order to present a holistic view of the business from a single information and IT architecture. Enterprise Resource Planning are systems capable of managing in an integrated way the information and knowledge of all the processes of a company, from the most primary such as, for example, those related to accounting, purchasing, sales, production to other secondary (although equally important) such as those related to human resources management, cost management, quality etc. ERP systems are, therefore, a communication platform between all areas of the company, which can achieve, through their exploitation, greater efficiency. As a result peripheral issues such as the elimination of conflicting information, the reduction in data redundancy, and standardization of business unit interfaces, global access and security all fell under the objectives of ERP system design.

The concept of Enterprise Resource Planning, and the systems designed to supply the functionality required to make this concept a reality, represent a significant step in the long history of technology assisted business-process integration. Earlier concepts were designed to assist planners by logically linking various forms of process information in specific business contexts such as manufacturing. Today more than ever, the capability of such systems to allow additional decision support and information analysis packages to be "bolted on"

has become another critical feature. Because of the importance of these developments, as a first step towards organizing future ERP research it is critical to make a clear distinction between references to the ERP “concept” and references to ERP “systems”. The interpretations of a number of authors clarify this distinction. For example, Mabert, Soni and Venkataramanan (2000) describe a “concept”-based definition of Enterprise Resource Planning as involving the “seamless integration of processes across functional areas with improved workflow, standardization of various business practices, improved order management, accurate accounting of inventory and better supply chain management”. ERP “systems” on the other hand are merely the vehicles through which this is accomplished and takes a parallel approach to separating the ERP “concept” from definition of ERP “systems” Bendoly (2001). This approach emphasizes that ERP “systems” should not be looked at simply as tools that have a fixed and measurable output, but rather as a technological infrastructure designed to support the capability of all other tools and processes used by a firm. Using arguments based on the Theory of Swift-Even Flow Schmenner and Swink (1998) and its ties to the Law of Bottlenecks Goldratt (1989), the proposal is that the benefits made possible from both the presence of such architecture and the process of establishing it are analogous to those provided by continuous improvement mechanisms.

LITERATURE REVIEW

Enterprise resource planning (ERP) is the ability to deliver an integrated suite of business applications. ERP tools share a common process and data model, covering broad and deep operational end-to-end processes, such as those found in finance, HR, distribution, manufacturing, service and the supply chain. ERP applications automate and support a range of administrative and operational business processes across multiple industries, including line of business, customer-facing, administrative and the asset management aspects of an enterprise. ERP deployments are complex and expensive endeavors, and some organizations struggle to define the business benefits.

But they are also systems able to connect with each other and transfer information in an automatic way, with the consequent saving of costs, time, errors, and with the availability of online information at any time (Romero & Vernadat, 2016). In this way, ERPs can not only improve the internal functioning of an organization but, well implemented and exploited, can

improve the company's relationship with its environment, including increasing the efficiency and response capacity of an organization's supply chain (Romero & Vernadat, 2016). Obviously, not all ERPs are the same, they do not have the same characteristics in terms of modules, options, functionalities, costs, implementation complexity, usability etc. There are many ERP systems in the market and are focused on different types of organizations, such as large companies, multinationals, companies in specific sectors (these systems are known as "vertical" or "sectoral"), a geographical area etc. Therefore, since in many organizations, ERP systems are the information engine that allows the execution of business processes (Cunha, et al., 2016), the customization of the ERP software suitable for a Concrete organization, with its particular characteristics, is an extremely critical decision for the said organization. However, many organizations, especially SMEs, lack in most cases adequate knowledge to make this customization. To facilitate this decision-making and, above all, to be able to make the decision in a more appropriate way, a methodology is needed that proposes step by step the activities to be carried out. Therefore, the main objective of this article is to assess the customization process with the aim of designing a methodology that can serve as a guide for the customization of ERP systems in SMEs.

To this end, an analysis of the scientific literature has been made regarding the customization of information systems and more specifically ERP systems, and subsequently the information has been contrasted to the theoretical study in the business environment, interviewing ERP system implementation consultants as well as companies that have implemented these systems and recognized experts in the sector. ERP systems now offer businesses an information platform where many of the techniques, concepts and strategies that we have studied over the years can actually be applied. The reality is that much academic research is terribly restrictive in its applicability. In comparison, ERP vendors are forced to tailor their software to market niches such as high volume repetitive manufacturing, the process industry, automotive suppliers, and hospitals/health care providers.

ADVANTAGES OF ENTERPRISE RESOURCE PLANNING (ERP)

Achieving integrated system of operation in an organisation through enterprise resource planning have advantages (Saudi ERP, 2016).

1. Optimization of business processes.

2. Accurate and timely access to reliable information.
3. The ability to share information between all components of the organization.
4. Then, as each module of the [ERP system](#) enters the same real-time database, another advantage is that no duplicate records or playback operations, i.e, redundancy is avoided.
5. The performance of all work units that make up their business because better use time is increased. If you previously had to make reports and take them from one place to another, now the time is spent on other activities.
6. To improve performance and save time, optimize the control and analysis of management decisions there in the long term, reduced costs for the company.
7. Another obvious advantage is in terms of customer service, because the response time is reduced attention to them and help to enhance more competitive in the environment in which it operates.

DISADVANTAGES OF ENTERPRISE RESOURCE PLANNING (ERP)

1. The installation of the [ERP system](#) is costly. ERP consultants are very expensive take approximately 60% of the budget.
2. The success depends on the skills and experience of the workforce, including education and how to make the system work properly.
3. Resistance in sharing internal information between departments can reduce the efficiency of the software.
4. Change of staff, companies can employ administrators who are not trained to manage the ERP system of the employing company, proposing changes in business practices that are not synchronized with the system.
5. Having an ERP system has many advantages, but does not guarantee the total success of the company. Organizational culture, know how to involve staff and anticipate changes that will suffer the organization using this system of administration, are important elements for the completion of the implementation.
6. The effectiveness of the ERP system may decrease if there is resistance to share information between business units or departments. Due to strong changes that implementation of the ERP system brings in the

culture of work, there may be poorly trained or disinterested in making use of the same staff...

7. The benefits of having an ERP system are not presented immediately with the implementation of the software, they will be evident long after the system is running.
8. The culmination of the implementation depends on the ability and skill of the workforce, also involves education and training, to make the system is correctly applied.

SCOPE OF ENTERPRISE RESOURCE PLANNING (ERP)

1. **Financial Accounting:** this module is designed to collect the relevant data for financial accounting in order to provide managers with extensive financial reports. It contains general ledger, account payable, account receivable, asset management, all information about the cash of the company which includes accounts payable (all financial obligation of the company to its suppliers, contractors, and customers), account receivable (all financial obligations of customers, suppliers, and debtors to the company) and general ledger (the log of all real and apparent cash flows including actual receipts and disbursements, internal funds transfers, and accrued changes in value).
2. **Financial Management:** include fixed assets management (acquisition, improvement, amortization, depreciation, facilities, and major equipment) and financial assets management (cash account, payment, invoicing and receipt of payment).
3. **Human Resources Management (HRM):** it contains information about regular capture of leaves, time and attendance, payroll and compensation, hiring and separation. HRM module contains information on employees and all aspects related to employees such as retirement, employment candidates, personal information of employees, employment history, evaluations, achievement, awards, education and skills, salary, pension, time and attendance, leave status, security and insurance, etc. It also contains some information about organizational structure, employee title and supervisory relationships.
4. **Investment Management:** this module provides analysis before investment and decisions of investment returns.

5. Plant Maintenance: the module organizes maintenance planning and inspection. It supports the planning, processing, and finalizing of plant maintenance tasks. The system tracks maintenance costs and make maintenance decisions which may be preventive or corrective.

BENEFITS OF ENTERPRISE RESOURCE PLANNING (ERP)

Enterprise Resource Planning system provides a number of advantages for firms to improve the organisation performance. Based on information perspective, ERP system adoption can improve the interaction between the business functions and the information is more reachable. For other issues related to the interaction between firm with the customers and suppliers, such as product delivery and inventory control management, have less influence. ERP systems have more advantages in information quality and the integration of business processes and operations, but it does not decrease the information technology costs, (Samira et-al, 2013).

ERP BENEFITS TO BUSINESS ORGANISATION

| FUNCTIONAL AREAS | DECISION AREAS | ERP BENEFITS |
|-------------------------|-----------------------|--|
| HUMAN RESOURCES | STRATEGIC | Application of ERP System at this level Improves employee performance through an integrated work schedule and job execution, among the benefits are improved job learning, employee training and development, this also contribute to human resources and organisational efficiency. |
| | TACTICAL | ERP system at this level enhance the interaction between organisations functional and business units, improved administrative activities And ability to decentralized new |

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|---------|-------------|---|
| | | information systems functionality to improve the performance of the Industry thereby achieving business unit efficiency and industry performance. |
| | OPERATIONAL | Information integration is made possible, ERP systems can integrate all of the data and information from the human resources department with other functional Departments at operational level. |
| FINANCE | STRATEGIC | Through ERP system, data and information integration in the entire business processes is made possible, the finance business unit has finance Information accuracy that can support faster decision making. Information viable investment and sources of funds are better understood, as well capability and improved corporate governance, Transparency and financial management efficiency. |
| | TACTICAL | ERP system in Financial help managers to report, analyse, and allocate cash in real time, and establish in-house banks or payment centers. ERP System help in Improving the performance of the Industry, Improve cash management |

| | | |
|-------------------|-------------|---|
| | | Improve decision making capability as well reduce finance costs. |
| | OPERATIONAL | Improve the information accuracy Speed, quality/ and availability Decrease financial close cycle ERP System enhances general information integration |
| PRODUCTION | STRATEGIC | Generate product differentiation Increase the interaction between organisation with customers and suppliers in a long term plan |
| | TACTICAL | Better production planning and scheduling Improve resource utilisation Lower inventory level improve decision making capability Improve the interaction between business units Centralise the administrative activities Greater ability to deploy new information systems functionality Improve the performance of the industry Facilitate business learning |
| | OPERATIONAL | Improve the information accuracy/speed/quality/ and availability Improve order management/order cycle Reduce quality costs Reduce cycle time of production, Better inventory management Better operations efficiency, Reduction in maintenance and |

| | | |
|------------------|--------------------|--|
| | | downtime, Manufacturing flexibility, Reduce direct operating costs, General information integration, Real time data access across multiple, sites, Reduce work in process. (Samira, Abdoulmohammad, Negin & Riza, 2013) |
| MARKETING | STRATEGIC | ERP systems help to provide a better understanding of the customer needs for the customized services and products |
| | TACTICAL | Improve customer services Improve decision making capability Improve the interaction between business units, Centralise the administrative Activities, Greater ability to deploy new information systems functionality, Improve the performance of the industry |
| | OPERATIONAL | Improve the information accuracy/ speed/quality/ and availability Improve order entry Improve on time delivery General information integration Real time data access across multiple sites |

**SOURCE: Samira, Abdoulmohammad, Negin & Riza (2013) & Authors
Conceptualization**

CONCLUSION

The research paper examined the benefits of enterprise resource planning (ERP) on business organisations. The overall benefits of ERP include improving

performance and save time, optimize the control and analysis of management decisions there in the long term, reduced costs for the company operations. There are many ERP systems in the market and are focused on different types of organizations, such as large companies, multinationals, companies in specific sectors (these systems are known as "vertical" or "sectoral"), and a geographical area. The paper specifically examined four functional areas; Human resources, Finance, Production and Marketing management functions and its ERP benefits along Strategic, Tactical and Operational lines. It further dwell on ERP advantages with overall objective of achieving competitive business environment and overall performance.

RECOMMENDATIONS

1. Business organisations should endeavour to explore and apply ERP system in order to help reduce the cost operations.
2. Since the success of ERP depends on the skills and experience of the workforce, including education and how to make the system work properly, there should be adequate staff training to aid in understanding the rudiments of ERP application
3. There should be adequate and proper internal information management, this is because ERP system deals with information sharing and management of all functional areas of the organisation.
4. Further research is required in areas cost of running and operating a sound ERP system.

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